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CLASSIFICATION C-O-N-F-I-D-E-N-T-I-A-L [redacted]

CENTRAL INTELLIGENCE AGENCY

INFORMATION REPORT

REPORT [redacted]

CD NO.

25X1

COUNTRY USSR (Whole)

DATE DISTR. 8 [illegible] 195[illegible]

SUBJECT Nickel Powder Production at Chemical Plant in Chapayevsk

NO. OF PAGES 7

PLACE ACQUIRED [redacted]

DATE OF INFO. [redacted]

NO. OF ENCLS. (LISTED BELOW)

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SUPPLEMENT TO REPORT NO.

THIS IS UNEVALUATED INFORMATION

[redacted]

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[redacted] Comment: The following spelling changes should be noted:

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For	Read
Zukhum	Sukhumi
Kuibyshev	Kuybyshev
Electrostal	Elektrostal

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CLASSIFICATION [redacted]

STATE	X	NAVY	X	NSRB		DISTRIBUTION			
ARMY	X	AIR	X	FBI		AEC	X		[redacted]

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COUNTRY USSR REPORT 25X1

TOPIC Chemical Plant in Chapayevsk, Atomic Energy Program 25X1

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EVALUATION PLACE OBTAINED

DATE OF CONTENT 25X1

DATE OBTAINED DATE PREPARED 4 May 195- 25X1

REFERENCES

PAGES 2 ENCLOSURES (NO. & TYPE) 2 - sketches with legends on ditto

REMARKS

This is UNEVALUATED Information 25X1

1. From the Chapayevsk railroad station and about 2 km southeast of the chemical plant, a track branched off from the double-track railroad line to Kuibyshev and extended into the plant area. A second track entered on the city plan was not seen. A southeast-northwest road which passed a soccer field, a worker settlement and a hospital located in a park extended into the plant area. In the north the plant was bordered by a river which flows in a wide curve around the plant. The river was frozen and covered with snow. 25X1

2. No information was obtained on the official plant designation and its assignment. The nickel shop, [illegible], belonged to the main laboratory of the plant. The chief of the main laboratory was also chief of the nickel shop. During the war, the plant had reportedly produced plastic material and, in 1948, chlorine and acids. As confirmed by Soviet statement the nickel shop/operation since 1948, produced nickel required by the Electrostal Plant in Noginsk for the production of diaphragms. The nickel powder was produced according to the system developed by Professor Tsimsen.

3. operated the nickel generators for a period of about four hours, and advised Soviet personnel in the correct operation of the two units which, at that time, could not produce fine nickel powder. The nickel generators had a steel lining with a too rough surface and a 5 to 10 cm layer 25X1

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of nickel powder sticking to the lining seriously handicapped the heat transmission from the heating jacket to the heating chamber. After these inner walls had been nickel coated and polished the units produced powder as fine as 5 μ minimum.

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4. improvement of the thermo element equipped with a 1 1/2 protective glass pipe which did not permit exact measurements of the internal temperature.

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5. Experiments were made to reduce the inflamability of fresh nickel powder "Pyrophor". by letting the nickel powder cool d 25X1 down more slowly which effected a slower oxidation of the powder. As soon as the power was switched off, CO_2 was fed into the nickel generators leaving still enough oxygen there to produce an oxide film on the powder. The storage of nickel powder mixed with alcohol proved to be impractical. During the period of observation, no large quantities of nickel powder 25X1 were produced, since all efforts were concentrated on learning from the German experts how to improve the production method.

6. The nickel shop was surrounded by a board fence but was not specially guarded. An MVD Sentry armed with a submachine gun was posted in front of the plant entrance. Inside the entrance, a Soviet woman and a soldier, 25X1 both MVD members and not armed, checked the gate passes and gave body checks to all plant members. Even department chiefs who were in charge of 70 men were checked. The plant area was fenced in, only the northern 25X1 part had a river as a natural border.

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7. The department chief of the workshop who was probably a chemotechnician had signed in Moscow a three year contract for Chapayevsk had been forced against his own will to stay for another three years. The same thing happened to most of his Soviet colleagues. among other activities, water analyses were being made there, allegedly to determine 25X1 the hardness.

1. Comment. It is believed that the reported plant is Chemical Plant 103 which had been known from wartime information. No post war information had been received. For a location sketch, see Annex 1 and for a layout sketch of the nickel shop, see Annex 2.

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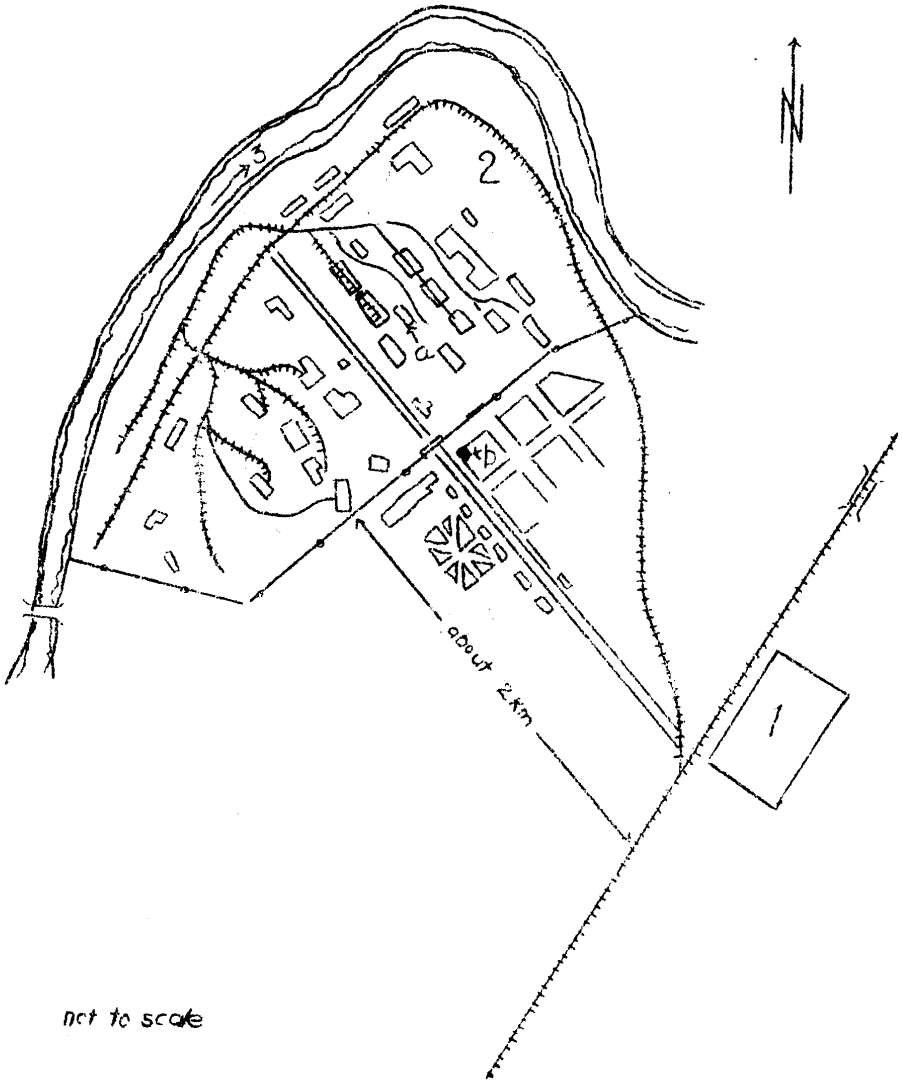
Sketch No. 1
Location of Chemical Plant in Chapayevsk



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Annex 1

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Location of Chemical Plant in Chapayevsk.

Legend:

1 Chapayevsk railroad station

2 Plant 102

a. so-called nickel shop

b. Quarters

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3 Chapayevka River

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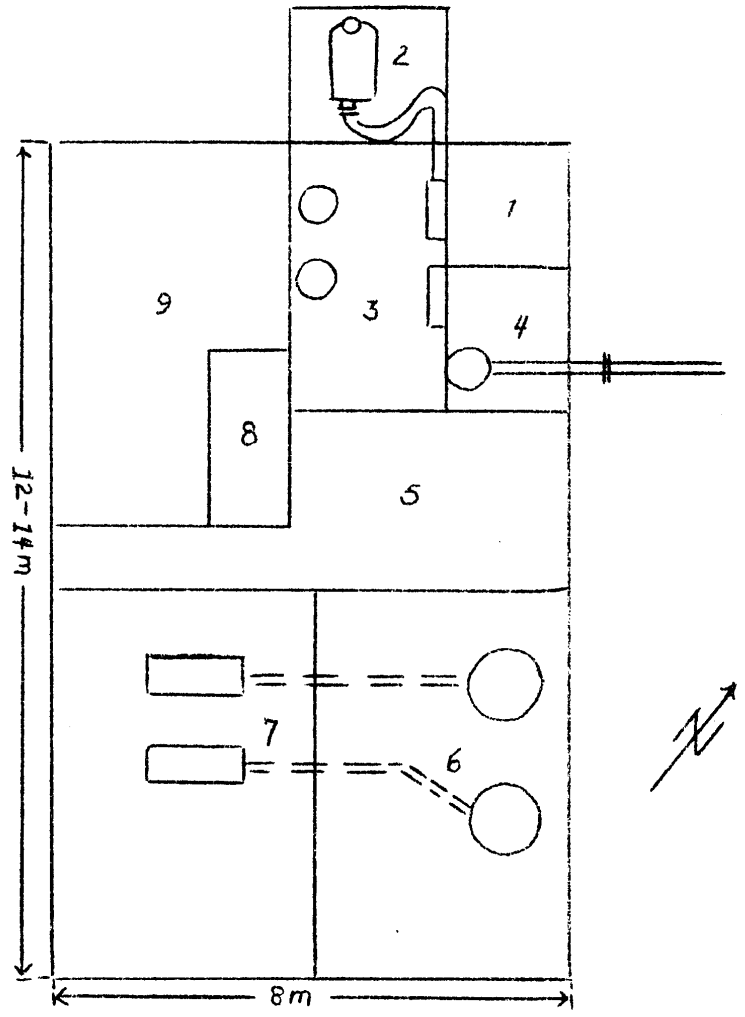
Sketch No. 2
Layout of Nickel Shop at Chemical Plant in Chapayevsk



not to scale

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Annex 2 [redacted] 25X1

[redacted] 25X1

Layout of the nickel shop at the Chemical Plant in Chepayevsk.

1. Switching station

2. Compressor station with tower-type compressor which was connected to another plant building by means of a pipe line, about 100 mm in diameter. The compressor was heated to a constant inner temperature of 600 centigrades and was to pump air out of the nickel generators and to feed fresh air. The remaining oxigen was gasified to be fed as heating gas to the generators.

3. Two nickel generators similar to those used at the Ardenne Institute, except for the 4-mm mild steel lining and the Wulf type container which was made of metal and not of glass.

4. Oxidation chamber, supplied with CO_2 or N_2 by an underground pipe

5. Mixing room with a mixing drum 1,000 mm long, and 6,000 mm in diameter. The drum operated electrically and was used to homogenize various sorts of nickel powder.

6. Autoclave room, equipped with two autoclave units. [redacted] 25X1 [redacted] nickel carbonyl was heated there. No further information available.

7. Pumping station with two pumps, which might have possibly been connected to the autoclaves and pumped nickel powder into these units. (the information was given with reserve).

8. Depot 25X1

9. Office